

## Crab Trawl Fishery

From November 1990 through November 1991, 15 trips were made aboard commercial crab trawlers in the Pamlico-Pungo river complex. Fifty tows were examined for catches and discards of blue crabs, southern flounder (Paralichthys lethostigma) and miscellaneous fishes and invertebrates. Five areas in the riverine complex were fished with a variety of gears (Figure 1 and Table 2).

With the exception of two trips, all samples (the combined catch of all tailbags from each tow) were examined in the following manner: marketable and unmarketable organisms were separated to species and placed in individual fish baskets. For finfish, the number and weight of each species and cohort [marketable ( $\geq 330$  mm for flounder) and unmarketable] were recorded. Additionally, 30-60 individuals of each economically important species and cohort were randomly selected, measured [fork length (FL) or total length (TL)], and their subsample weights obtained. For blue crabs, the total number and weight were obtained and 30-60 individuals of both categories [legal ( $\geq 127$  mm and all mature females) and sublegal] were randomly selected, measured [carapace width (CW), measured from spike to spike], sexed, identified to peeler stage and a total subsample weight was obtained. Maturity was recorded for female crabs (immature - triangular abdomen, mature - ovate abdomen). Miscellaneous organisms (grass, tunicates, etc.) were separated and weighed. All weights were taken to the nearest 0.01 kg and length and width measurements to the nearest millimeter. The following list defines the various peeler stages as determined by examining the margin of the propodite of the fifth pereopod.

1. Green - no peeler line visible;
2. Hair - faint line; peeler line beginning to form; little margin between line and fin edge;
3. White line - clear space bordering edge of fin;
4. Pink line - peeler line pink in color;
5. Red line - peeler line dark red in color;
6. Buster - posterior edge of carapace cracking, shedding initiated;
7. Soft - shedding completed and carapace is soft; and
8. Paper - shedding completed and carapace has become leathery.

For ease of discussion the eight peeler stages were divided into four groups: intermolt (green); premolt (hair and white); molt (pink, red, and buster); and postmolt (soft and paper).

Sample work-up for the two trips that were not examined completely was as follows. One sample (28 December 1990) was examined as described above except that no lengths were taken. For the other sample (12 June 1991), bulk weights were obtained for legal and sublegal crabs, flounder, miscellaneous finfish, and shell. Additional information that was collected for all trips included tow time, net specifications, towing speed, starting and stopping tow coordinates and trip ticket information. Trip tickets represent the landed catch for a given trip and include the total weight and value of each market category. Depending on market conditions blue crabs are usually divided into baskets (male crabs sold live) and culls (females and males  $\leq 5$  1/2" or 6"), or graded straight (all crabs grouped together).